REMARKS

In response to the Official Action mailed on November 29, 2005, reconsideration of the rejections of the claims is respectfully requested in view of the following remarks.

Claims 1 - 11 were provisionally rejected on the ground of nonstatutory obviousness-type double patenting as unpatentable over claims 1 - 10 of copending Application No. 10/919,525. The Applicants respectfully traverse this rejection but wish to defer providing explicit arguments for traversing until such time that the rejection becomes an actual obviousness-type double patenting rejection.

On page 3 of the Official Action, claims 1 - 6 and 10 were rejected under 35 USC 103(a) as unpatentable over Sato '033 (U.S. Patent No. 6,492,033) in view of either JP '521 (JP 59-80521). Since claim 10 has been allowed, it appears that inclusion of claim 10 in this grounds of rejection was a mistype, so claim 10 will not be discussed here. This rejection is respectfully traversed because there is no motivation in the references to combine them in the manner proposed in the Official Action.

Sato '033 discloses a lead-free plain bearing formed by dispersing an alloy powder on a backing plate and sintering the powder to the backing plate. In addition to containing Sn, Ag, and Cu, the alloy powder may include MoS_2 powder or graphite powder.

JP '521 discloses a bearing material having a porous layer containing graphite particles coated with Cu or a Cu alloy, with the porous layer being either impregnated with or coated with a fluororesin.

The Official Action proposes to combine these references and thereby modify Sato '033 so as to employ a copper-coated graphite powder as taught by JP '521. However, a person skilled in the art would have found no motivation from the references to make this modification of Sato '033 on account of the fact that Sato '033 and JP '521 relate to two very different types of bearing.

Namely, Sato '033 pertains to a lubricated bearing with a nonporous surface. Sato '033 discloses in column 5, lines 52 - 63 that after sintering, the bearing layer is refined with a pressure of 300 - 500 MPa. This very high pressure (corresponding to 43,511 - 72,518 psi) results in the bearing layer being nonporous and requires it to be used in a lubricated state.

In contrast, the bearing material disclosed in JP '521 has a porous surface layer and is intended for use as a dry bearing. As stated on page 127, lefthand column of JP '521, "From in the past, a bearing material which can be used in an unlubricated state is used as a so-called dry bearing". As further stated in the righthand column of page 127, "The object of the present invention is to solve the above-described problems and specifically to provide a bearing material which integrally sinters graphite in a porous layer...".

Thus, whatever benefits are provided in JP '521 by copper-

coated graphite particles are described solely with respect to a porous bearing layer, and there is no teaching in JP '521 that these same benefits could be obtained in a nonporous bearing layer such as is used in Sato '033, or indeed that copper-coated graphite particles could provide any benefits in the bearing disclosed by Sato '033.

Accordingly, as there is no motivation in either reference to modify Sato '033 in the manner proposed in the Official Action, the Official Action does not set forth a *prima facie* of obviousness with respect to claims 1 - 6. These claims are therefore allowable.

Claims 4 - 6 are allowable for the reasons given above and are further allowable because they include features not taught or suggested by the cited references. Independent claim 4 is a product by process claim, the process including two sintering steps, i.e., a step of sintering a mixed powder, and a subsequent step of sintering a powder dispersed on a backing plate. Page 4 of the Official Action acknowledges that the method described in claim 4 is different from the method described in Sato '033, but the Official Action indicates that it cannot be determined by the Examiner if this difference in method results in a difference in structure.

To illustrate the difference in structure between the bearing alloy disclosed in Sato '033 and the structure described by claim 4, the Applicants prepared the attached photographs of cross sections of two different bearing alloy layers. The

lefthand photograph shows a cross section of a bearing alloy prepared by the method set forth in Sato '033, including a single sintering step, and the righthand photograph shows a cross section of a bearing alloy prepared by the method set forth in claim 4, including two sintering steps. In each photograph, the wavy horizontal line near the bottom of the photograph indicates the interface between the sintered bearing layer (the upper portion of the photograph) and a metal backing plate (the bottom portion of the photograph). The sintered bearing layer shown in the lefthand photograph contains a large number of voids, indicated by dark spots in the photograph. In contrast, the sintered bearing layer in the righthand photograph is substantially without voids. The differences between the two layers are apparent even in a black and white photocopy but are far more striking when viewed in color, with the sintered layer in the righthand photograph being noticeably more uniform in texture than the sintered layer in the lefthand photograph. The large dark splotches in the righthand photograph indicate copper-coated graphite particles. The bearing alloy in the lefthand photograph does not contain graphite particles, since commercial products manufactured by the process set forth in Sato '033 are often without graphite particles, but the difference in the amount of voids between the two bearings is due to the second step of sintering, not to the presence or absence of graphite particles.

From a comparison of these photographs, it can be seen that the structure of the multi-layer sliding part described by claim

4 is readily distinguishable from the structure of the bearing alloy disclosed in Sato '033. Since the difference in structure is not attributable to the presence of graphite particles, even if Sato '033 were combined with JP '521 in the manner proposed by the Official Action, the combination would still not result in a sliding part having the structure set forth in claim 4. Accordingly, the combined references cannot render claim 4 obvious. Claim 4 and claims 5 - 6 which depend from it are therefore allowable.

New claims 12 and 13 describe additional features of the present invention and are supported by the table on page 9 of the present application. These claims are allowable as depending from claim 1 or claim 4, respectively.

Claims 7 - 11 have already been allowed.

In light of the foregoing remarks, it is believed that the

present application is in condition for allowance. Favorable consideration is respectfully requested.

Respectfully submitted,

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Date: March 23, 2006

Attachment: photographs of cross sections of bearing layers